BULLETIN
OF THE
TORREY BOTANICAL CLUB.

Vol. XVII.] New York, July 1, 1890. [No. 7.

The Revised Manual and Some Western Plants.

By E. J. Hill.

In giving the geographical range of plants as briefly as a handbook requires, liabilities to err by trying to say much in a word or short phrase must be recognized. That all sources of information are not equally and carefully examined may also be true, and as a consequence omissions may occur and due credit fail to be given. The literature of local botany has become quite extensive; all of it is not very accessible and some likely to be overlooked. The details of geographical distribution even in a part of a large country is a subject requiring great patience in research and special aptitude for its pursuit. Some of these omissions or lapses from the ideal had been noticed in the Revised Manual. One naturally turns first to those things which are familiar to him in his own field, or to which he may have called attention somewhere, and so the error is easily detected. Prof. Porter has mentioned some in the BULLETIN for March. It is evident that the botany of the future can best be made complete by the co-operation of all who are interested, and who may have special knowledge of particular fields which they are willing to communicate, and place within easy reach of those who prepare our manuals. But first I will notice a few errors in Prof. Porter's article, if I understand the purport of his restrictions and inquiries.

One plant he mentions is *Polygala polygama*, Walt., said in the Manual to be "common." To this the remark is added, "A plant of the eastern seaboard and rare in northern New Jersey, not known in Pennsylvania." Perhaps this does not mean that the plant is confined to the seaboard, but that would be the inference. The older Manual said: "Dry, sandy soil; common eastward," not necessarily confining it to the East, but making it

common only there. That the word "common" is too broad a term is plain, since it does not occur throughout, as is evident from its absence from Pennsylvania, and my experience with it in the lake region coufirms this, since it is a plant local in character of habitat, though abundunt in any locality adapted to its nature of growth. Its peculiar mode of growth causes it to produce abundance of seed and plant them effectually, thus securing a numerous progeny where it happens to grow. But its confinement to light or sandy soil necessarily restricts its area. Such, at least, is its character in the western region. It is found in such localities along the Great Lakes, and extends into the Mississippi basin in Illinois, Wisconsin and Minnesota. Nuttall is probably the earliest authority for its presence at the West. In his Genera (ii. 87) he says, "*P. polygama*, Ph. HAB.—In the pine forests of Lake Michigan." The plants Nuttall used in his description were not from the same locality from which Pursh obtained the species described in his Flora (ii. 465.) "the pine barrens of Carolina," for Nuttall adds to his characterization, "Mr. Pursh's plant appears to differ considerably from the one here described, but I am persuaded it is the same from a good specimen which I have seen in the possession of Z. Collins, Esq., agreeing with the Michigan plant." Its range along the Great Lakes is about equal to their extent. Macoun gives it from the Lake of the Woods at the west, to the plains of Rice Lake, north of the central part of Lake Ontario. It therefore is represented in four of the river systems or groups of North America as defined by Guyot; the Atlantic slope of the Appalachian Mountains, the St. Lawrence, the Mississippi, and the valley of the Red and Nelson that discharge into Hudson Bay.

The second plant of the list to be noticed is *Phragmites communis*, Trin. "Edges of ponds," says the Manual. "Along the coast and the Great Lakes, but not elsewhere," adds Prof. Porter. A few references will show that it is not restricted to this range either in extent or abundance. In the catalogue of the Plants of Indiana, compiled by the editors of the *Botanical Gazette*, it is accorded a station in the extreme southwestern part of the State on the authority of Dr. J. Schenck. It evidently is found throughout the State, as we learn from the preface of the cata-

logue that this is the meaning when localities are not specified, that of the lower Wabash being for height of stem (19 feet) and not for locality. Dr. A. J. Phinney, in a list of plants of central eastern Indiana, published in the Twelfth Report of the State Geologist, (1882) says it is common in the region embraced in his list, about four counties lying in the valley of the Ohio. Patterson, in his "Catalogue of the Plants of Illinois," states that it is "common" in the State without restriction of range. It is given by Dr. Lapham in his "Native, Naturalized, and Cultivated Grasses of Illinois," (1850). In Minnesota, on the authority of Upham, we find it "common or frequent in the edges of ponds and lakes throughout the prairie portion of the State." It is given by Arthur in the list of Iowa plants, and by Lapham in that of Wisconsin. Hence we find the upper Mississippi region well represented by *Phragmites communis.*

The third plant is *Zizania aquatica*, L. "Common" says the Manual. "Along the seaboard and the Great Lakes, but where else," Prof. Porter asks. The answer is the upper Mississippi and the Red River of the North, as can be easily shown. In fact, if we take account of its use by the Indians as a consequence of its abundance, it is a plant even more characteristic of these regions than of the seaboard and Great Lakes. It is published in all the lists cited for *Phragmites communis*, and with about the same range, though less common at the south. In Indiana, outside of the lake area, it is assigned a place in Gibson County, and in the four counties of Dr. Phinney's list. In Illinois, Patterson has it "common." In Minnesota, Upham says, "common or frequent in favorable situations throughout the State." Besides these may be mentioned Dr. Parry's "Synoptical Catalogue of the Plants of Wisconsin and Minnesota," published in Owen's Report, (Philadelphia, 1852) and Dr. Douglas Houghton, in a list appended to Schoolcraft's "Narrative of an Expedition through the upper Mississippi to Itasca Lake." He closes the list with the entry, "*Zizania aquatica*, Pursh. Illinois to the sources of the Mississippi." I do not find it in the short list prepared by De Schweinitz from plants collected by Say in connection with Long's Expedition to this region, but it is frequently mentioned in the account of the expedition compiled by Prof.

Keating,* both by its common and botanical names. Here are five states, besides some of British America, lying outside of the lake region wholly or in great part, where *Zizania* is found, generally in abundance, Indiana, Illinois, Iowa, Wisconsin and Minnesota. And this region is the one mentioned at the beginning of the paragraph.

I will now mention a few plants whose range as indicated in the Manual, is either too restricted or otherwise incorrect, as they have fallen under my notice, indicating also where information may be found concerning them.

Corydalis micrantha, Gray, should be credited to Illinois, "Sandy river banks, &c., throughout the State" (Patterson; Cat. of the Plants of Ill., 1876).

Lechea thymifolia, Michx. Abundant in the sand-barrens at the head of Lake Michigan in Ind. (Bot. Gaz., 1881 as *L. Novæ-Cæsareæ*, Austin, and in 1883 as *L. thymifolia*, Michx).

Arenaria patula, Michx, Tippecanoe Co., Ind. (Cat. of the plants of Ind. by the Editors of the Bot. Gaz., 1881). Near Chicago, Ill., (Babcock; Flora of Chicago and vicinity. The Lens, 1872). I know of no place in Illinois where it is found except here. One of these stations is west of the city at Riverside on the Desplaines River, and two on the south side, within the limits of the city, where it grows in the thin soil covering limestone rocks. As they are likely soon to be extinct by reason of the growth of population, they may be placed on record; one is 75th St., near the lake, and the other "Stony Island," near 93d St. This is an interesting example of a plant, southern in general range, that comes to the head of Lake Michigan, where some plants of a sub-alpine cast are also found. The station in Tippecanoe Co. may indicate the line of connection.

Stellaria crassifolia, Ehrh. Michigan. (Wheeler and Smith's Cat. of the Plants of Mich., 1881), given on the authority of Dr. Lyon, and without locality. For Illinois, besides the station mentioned in the Manual (Ringwood) may be given Crete, Will Co., near the Indiana State line, where I found the apetalous form of the plant in 1882.

---

* Narrative of an Expedition to the source of St. Peter's River, Lake Winnepeck, Lake of the Woods, &c. Performed in the year 1823. London, 1825.

Ammania coccinea, Rottb. Has a range in Illinois as far north as Kankakee, and thence south through the State (Patterson, l. c.).

Utricularia resupinata, B. D. Greene. Lake Co, Ind. (Bot. Gaz., viii, 187). Very abundant on the east shore of Woodard Lake, Iona Co., Mich. (Wheeler & Smith, l. c.). This brings its range much farther west than Presque Isle, Pa.

Juncus Greenii, Oakes and Tuckerm. As far west as Kankakee, Ill. (Patterson, l. c.). Lake Co., Ind. (Cat. of Ind. Plants, 1881). Said in the Manual to occur on the east shore of Lake Michigan. The older edition mentioned the east side of the State near Detroit. Are these the same?

Fimbristylis spadicea, Vahl., var. *castanea*, Gray. Frequent at the head of Lake Michigan, from Chicago east. Also in three other counties of Illinois—Kankakee, St. Clair and Henderson (Patterson, l. c.). The last two border the Mississippi, St. Clair Co. being opposite St. Louis. Attention was first called to this and the preceding plant, together with *Rynchospora cymosa*, Nutt., in the Entomologist and Botanist of St. Louis, conducted by Drs. Riley and Vasey (Vol. ii. p. 384). This was in 1870, the three plants having been found growing together in Kankakee Co. All grow together in Lake Co., Ind. The *Juncus* and *Rynchospora* have the same range so far as known in Illinois and Indiana, and the *Fimbristylis* has been found with them, but with a wider range. All are representatives of eastern plants that come to the lake region and the Mississippi.

Agropyrum violaceum, Lange. Lake Co., Ind. (Cat. of Plants of Ind., 1881).

Potamogeton Robbinsii, Oakes. In Cedar Lake, Lake Co., Ind. (Bot. Gaz. 1888).

Potamogeton Hillii, Morong. N.E. Ohio, at Ashtabula. This was the locality where the specimens were found that afterwards led to its specific distinction. (Bot. Gaz., v. 53, vi. 290).

Aster ptarmicoides, Torr. & Gray, var. *lutescens*, Gray. The Manual states that this plant ranges from N. Ill to the Saskatchewan. But this is not based on facts. Having first mentioned the presence of this plant at Englewood, I may be at fault for some of this misconception. It was stated in a note in the Bot. Gaz. (xiv. 153) that it was Dr. Gray's opinion that it might have come in by the way of the lakes, or might be a remnant of a flora once continuous, since it was known to be found in British America. It was further stated that Upham thought it probable the plant

grew in Minnesota, since it was found on both sides of that State, in Canada and Illinois. But the only place for it yet found in our limits, so far as I am aware, is the station originally given. When in Minnesota the past season, I had hoped to see it, but the north-eastern part of the State is not suitable for its propagation. It is a plant of the prairie and plains, and would hardly come by the timbered region of the lakes to a southern locality, or be represented in its flora. If anywhere to be sought, it would rather be in the open country of the Mississippi Valley, where the streams would afford a still better means of communication.

Triglochin maritimum, L. "Salt marshes along the coast, Lab. to N. J., and in saline places in the interior across the continent." The Manual gives this range, which is well enough for extent but not accurate as to conditions. The plant is not confined to those which are saline, but is found in many places along the lakes and in the Mississippi Valley, where they do not exist. The older editions of the Manual were correct in not thus limiting it. It bears fresh water, or bog conditions, as well as *T. palustris*.

Some plants and stations may for convenience of record be added to this list, either not published before, or offered too late for insertion in the Manual.

Rosa Engelmanni, Watson. This was found last season in the sand barrens at the head of Lake Michigan, and is not uncommon. It had been to me a puzzling form of *R. blanda*, Ait., placed there for want of something better, till the description and figure in *Garden and Forest* of Aug. 7, 1889, were seen. Being at Tower, Minn., at the time, it was at once seen to be the more common form of Rose there, and on returning home in September, a comparison of fruit and foliage verified its presence here. The fruit of the Minnesota specimens was usually obovate-oblong, that of the Indiana oblong, or tapering about the same above as below, showing no punctures by insects to produce deformity, and moreover characterizing the fruit of a whole bush, it seemed a well-marked species. An occasional round or roundish fruit would appear on some bush, as though showing a tendency to mix with *R. blanda* and *R. humilis*, that grow plentifully in the immediate vicinity.

Utricularia purpurea, Walt. Found in Spring Lake, Mich., where I gathered it in 1872.

Sagina procumbens, L.. Champion Mine, Mich., 1889.

Potamogeton Robbinsii, Oakes. Republic, and Negaunee (in Goose Lake) Mich., and abundant in Chesago Lake, in eastern Minn., 1889.

P. obtusifolius, *Mert.* and Koch. Tower, Minn., 1889.

Brachytrichia Quoyii (Ag.) Bornet & Flahault.

This is the latest name for a alga, which has undergone quite a number of vicissitudes, illustrating some rather curious results of the rules of botanical nomenclature, as at present applied. In the List of the Marine Algæ of the U. S., published in 1876, Prof. Farlow mentions doubtfully as *Rivularia nitida?* a plant which he collected at Falmouth, Mass.; later in the same year it was published as No. 45 of the Alg. Am. Bor. Exs., as *Hormactis Farlowii* Bornet, Dr. Bornet having found this plant to be not the common *R. nitida* of Europe, but to belong to the same genus as *Hormactis Balani*, Thuret, a genus first separated in 1875. Soon afterwards it was discovered by comparison with the original specimens, that the *Nostoc Quoyii* of C. Agardh, from the Marianne Islands in the Pacific, was the same plant, and so in 1881 in Farlow's Manual of the Marine Algæ of New England, it appears as *Hormactis Quoyii*, Bornet. Now it has been found that the original specimens of *Brachytrichia rivularioides*, species and genus founded by Zanardini in 1872 on a plant from Borneo, are the same as our Falmouth plant; so that in the Revision des Nostocacées Hétérocystées of Bornet and Flahault, it appears under the name at the head of this paragraph. Although Zanardini's description differs entirely from the true structure of the plant, yet as the authentic specimens agree, the species must bear his generic and Agardh's specific name, they being respectively the first given.

As regards the plant itself, its occurrence on our shore is a curious phenomenon; it is widely distributed in the Pacific, having been collected at the Marianne Islands, Borneo, Ceylon and California; but its only known station in the Atlantic is at Falmouth, Mass. Its occurrence on our shore is not mentioned by anyone earlier than 1876, though it is a rather noticeable plant in midsummer, the season when most collecting is done. As to its range, I have found it abundant on the Buzzard's Bay shore at Wood's Holl, and in Quisset and Hog Island harbors, a few miles north. On the Vineyard Sound side of Wood's Holl I have looked for it for several miles along the shore, without finding a single growing plant, when at the time it was very abundant on

the other side. Rev. J. D. King, who is familiar with the marine flora of Martha's Vineyard, informs me that he has never found it there; Mr. W. A. Setchell has looked for it, unsuccessfully, in Long Island Sound; and as there is no reliable report of its occurrence elsewhere on this coast, I think it safe to say that it is practically confined to a few miles of shore from Wood's Holl north.

At the southern point of this range are the extensive works of the Pacific Guano Company, which has for some twenty years brought here for manufacture large quantities of phosphate from South Carolina and the Caribbean Sea. But for several years previous to 1870 this company obtained its raw guano from Howland's Island, which is nearly in the center of the range of the alga in question in the Pacific Ocean. If we compare the dates given above, and consider the very limited district inhabited by this species here, its abundance in that district, and its absence from adjacent districts where the conditions are the same and the marine flora in other respects is identical, it seems to me at least probable that we have a case of a species introduced by human agency; probably the first case noticed among the algæ of this region. FRANK S. COLLINS.

A Possible Natural Hybrid.

The two species of *Tragopogon* are not rare in some patches of grass-land near New Brunswick, the *T. porrifolius*, L., being the more common and very likely the older fugitive from Europe, while *T. pratensis*, L., is a smaller but none the less attractive species. A very marked difference in the color of the flowers serves to distinguish the species instantly when in bloom. The particular purpose of this note is to record the discovery of a probable hybrid between these two closely related species of salsify. One plant has been found combining the characteristics of the violet-purple species with those of the yellow *T. pratensis*. In size, the plant in question is midway between the two species; the peduncle has less of the swollen and fistulose nature of *T. porrifolius*, and is more enlarged than those of the normal *T. pratensis*. The involucral bracts surpass the flowers in the purple species, while in the yellow they are equalled, if not exceeded

by the corolla tips. In our hybrid the mean is struck, with this exception that the corollas are not of as uniform a length as in the types. Two are quite short and the others are long, as if there was an indecision due to contending forces naturally expected in a hybrid. But the point that is most interestingly striking is the happy mixing of the floral colors. The ligulate corollas are of peculiar purple and yellow, not easily described in words. To say they are rose is to come near, but not to accurately name the shade. The lower part of the flowers have a decided yellow tint, so that upon looking into the center of the head the inner part is of a yellow cast, while the outer parts, the marginal flowers, have the violet predominating.

It is rarely that we have such strikingly different colors as purple and yellow in close inflorescences in species of such manifest near kinship as our two *Tragopogons*, and they open up an interesting field for experiments in artificial hybridization with reference to the permanence of colors and other questions in cross-fertilization. The supposed natural hybrid plant has been marked, and it is hoped to save seed from it and determine if possible the enduring qualities of the progeny.

BYRON D. HALSTED.

RUTGERS COLLEGE, May 19, 1890.

Botrychium simplex, Hitch., in Maryland.

So far as I am aware this plant has until recently been known from only "New England, New York and northward."* A variety, however, is found in Wyoming Territory and California. During the early part of the summer of 1888, I found *B. simplex*, Hitch., growing in an overgrown thicket near Ellicott City, Md.

There were only three small plants growing near one another. I took one and marked the exact spot of the remaining two. Next season I could find no sign of either, but nearby (foot or two) were two others which either were not there the year before or that I did not notice, although I searched the place for some time. Growing in the same thicket I may mention, among the rare ferns, at least in this vicinity, *B. ternatum*, Swz., (two vars.), as well as *Ophioglossum vulgatum*, L., which is, indeed,

* It has been found on the Pocono Mt., Pennsylvania.—ED.

more plentiful in this thicket than either of the above named species.

At first I had some doubt whether my discovery was *B. simplex* or some nearly related species. But to settle all doubts I had recourse to one better acquainted with the ferns of this country then I, and sent the plant to Prof. L. M. Underwood (whose beautiful work on the subject I have been using). He very kindly confirms my opinion. He said, "Your specimen is a medium sized form of *Botrychium simplex*, which as you say, greatly increases the range of the species as published." In conclusion, I may add that within a radius of two miles from Ellicott City I have found between twenty-five and thirty species of ferns. Among them is one rare one, not already mentioned, *Camptosorus rhizophyllus*. Ferns are, indeed, in abundance in the neighborhood of Ellicott City. JOHN B. EGERTON.

Notes on Melica and Poa.

In the last number of the BULLETIN is an article entitled "Grasses in the Wrong Genus Cover" by Dr. W. J. Beal, in which article two species heretofore ascribed to *Poa* are transferred to *Melica*. I feel obliged to dissent from the views of Dr. Beal and will briefly give my reasons. In the genus *Melica*, so far as I am aware, the flowering glumes are always thicker than the empty glumes, and are generally rounded on the back, at least not compressed and keeled. The characters of *Melica* are well given by Dr. Thurber in Bot. Cal. Vol. 2, p. 302. Describing the flowering glumes (which he calls lower palets) he says: "Lower palet at length subcoriaceous, rounded or flattish on the back, 5 to many-nerved, the scarious tip usually blunt and entire or 2-toothed, &c." Again, "sterile flowers much the smaller and convolute together at the top of the spikelet." In describing *Poa*, he says: "Lower palet herbaceous or membrano-herbaceous, with scarious margins and top, compressed-keeled, &c."

The two *Poas* transferred by Dr. Beal agree with the characters of the genus *Poa* except in the obtuse glumes, and that is subject to much variation in other species of true *Poa*. *Poa macrantha* probably belongs to a group of polygamous or dioi-

cious *Poas* which occur on the Pacific coast from Chili northward. In neither of the species do we find the club-shaped, imperfect, upper flowers common in *Melica*.

GEO. VASEY.

Review of Foreign Literature.

Di una nuova stazione Italiana di Galinsoga parviflora, ed Eleusine Indica; e della presenza di altre pianti esotiche nelle vicinanze di Verona. A. Goirau. (Nuovo Giorn. Bot. Italiano, April, 1890).

The following is a list of exotic plants that have been found on the plains of Lombardy, conditions favorable to their existence.

Galinsoga parviflora, in and near Verona (1888) and Milan, and elsewhere in Lombardy, where in damp places it has become a weed.

Commelina communis, Lombardy.

Eleusine Indica. In 1879 *E. Indica* was seen for the first time by M. Goirau in the outskirts of Verona, along the moat and river, growing among rubbish heaps. The next year it had spread in amazing quantities and grew in great luxuriance. In 1882 the plant was seen for the last time, shortly before the great flood of the Adige, which took place that year, after which it disappeared. Prof. de Notaris reports *E. Indica* from the Lago Maggiore; it has also been found in the Province of Bergamo and at Crespano.

Solanum Sodomæum, in 1886, had spread from cultivation in and around Verona and along the river. Two forms have been observed, one with lilac and the other with white flowers.

Stramonium Tatula is found in the outskirts of the city, probably escaped from cultivation.

Stramonium Metel is cultivated as an ornamental plant and is sporadic along with the last.

Nicandra physaloides. This beautiful Peruvian Solanacea grows in great quantities along the Adige and the railroad, and has been found at Mantova.

Tournefortia heliotropioides is spontaneous in the vicinity of Bologna, in the Parmigiano and near Verona.

Solidago serotina, frequently cultivated in gardens, is now be-

coming wild in the neighborhood of Lucca. From 1870 to 1882 it grew abundantly with *Aster salignus* on the banks of the Adige. The locality is now destroyed, but the plants are found in the valley Ceraino and at Avesa, nearby.

Amorpha fruticosa grows in great quantities at Peschiera and in several other places, where it has evidently been introduced, and now shows a decided tendency to propagate ltself.

A. M. V.

Botanical Notes.

Laboratory of Biological Research of the Brooklyn Institute. Through the cordial co-operation of the officers of the New York State Fish Commission, and the great personal interest of its President, Mr. Eugene Blackford, the Brooklyn institute has been enabled to open a seaside laboratory for teaching and research in zoology and botany, under the direction of Dr. Bashford Dean. The laboratory is located at Cold Spring Harbor, Long Island, thirty-two miles from New York, reached by the Long Island Railway. The session opens on Monday, July 7th, and extends over eight weeks. The fee is twenty-four dollars. The location is a capital one, and an extensive corps of lecturers on special subjects has been secured, those on the botanical side being Dr. W. G. Farlow, Dr. N. L. Britton and Prof. Byron D. Halsted.

Index to Recent American Botanical Literature.

Abies bracteata. (Gard. Chron. vii. 672, fig. 112).

Allamanda violacea. J. D. H. (Bot. Mag. Tab. 7,122).

Anthracnose, or Blight of the Oak. Byron D. Halsted. (Garden and Forest, iii. 295, 296).

In this article the "burning" and "scorching" of oak trees is described and the case is said to be due to the fungus *Glœosporium nervisequum.*

Artificial keys to the genera and species of Mosses recognized in Lesquereux and James' Manual of the Mosses of North America. Chas. R. Barnes. (Trans. Wisc. Acad. Sci. Arts and Letters, viii. 12–81, reprinted. Price 50 cents, 12 for $5.00).

The price of this well printed, serviceable little pamphlet, should place it in the hands of all students of American mosses, and we hope the excellent advice given in the preface will be

followed by them. The first twenty-three pages are reprinted from the generic key published in 1886 with the addition of *Eucladium* and a few corrections. The keys to the species include also such recent additions as are well authenticated by exsiccatæ or by descriptions and figures with foot-note references. The following corrections may be noted: Page 65, as a foot-note to *Hookeria Sullivanti*, it should be stated that Mueller considers this a synonym of *Pterigophyllum lucens*. *Hypnum occidentale* is omitted also, and we learn from Dr. Watson that Hall's specimens are not to be found in the James Herbarium.

E. G. B.

Astragalus—A handsome. C. C. Parry. (West Am. Sci. vii. 9, 10).

A new variety is proposed, provisionally, from red-flowered specimens collected on the western borders of the Colorado Desert, to be known as *Astragalus Purshii*, Dougl. var. *coccineus*.

Botanical Generic Names Identical or too Nearly Alike. H. W. Harkness. (Zoë, i. 84, 85).

Nine identical and thirteen similar comparisons are made. From the list it appears that our friends, the mycologists, are mostly responsible for this duplication of names.

Carex rigida, Good. and its Varieties. L. H. Bailey. (Journ. Bot. xxviii. 171-173).

Professor Bailey takes up this older name for *C. vulgaris*, Fr., and refers to it a large number of varieties, those of American distribution being var. *Bigelovii*, Tuckm., var. *Goodenovii*, var. *strictiformis*, and var. *bracteosa*.

Central Nebraska—The Flora of. H. J. Webber. (Am. Nat. xxiii. 633–635; xxiv. 77–78).

An account of the botanical features of a trip to the valley of the Dismal River.

Closterium—A Note on. A. C. Stokes. (Microscope, x. 168-171).

Collemaceæ and Allied Groups—On the Carpologic Structure and Development of the. Wm. C. Sturgis. (Proc. Am. Acad. Arts and Sciences, xxv. 15-52, Plates I-VIII. Reprinted).

This is another of this year's contributions from the Cryptogamic Laboratory of Harvard University, of which Prof. Farlow

may be justly proud. The illustrations alone stamp it as a fine piece of work; fifteen species in the following genera are figured: *Sticta, Peltigera, Nephroma, Pannaria, Heppia, Hydrothyria, Physma, Leptogium* and *Collema*. E. G. B.

Congress of Botanists—An Internatianal. J. C. A. (Bot. Gaz. xv. 119–121).

A suggestion that an attempt be made for an International Congress in connection with the World's Fair. The Congress might be held at the place of meeting of the A. A. A. S. or elsewhere, according to local attractions. A number of foreign botanists are pretty sure to be in America at that time, and if a special occasion were made, doubtless others would attend. The suggestion seems to us a timely one.

Convolvulus occidentalis, Gray. T. S. Brandegee. (Zoë, i. 85, 86).

An argument against the specific difference between this plant and *Convolvulus macrostegius*, Greene.

Coprinus from Montana—Notes on a. J. B. Ellis and B. M. Everhart. (Microscope, x. 129-131, Pl. iv).

A new species is described and figured under the provisional name of *Coprinus sclerotigenus.*

Cotton Plant—A Microscopic Study of the. P. H. Mell. (Am. Month. Mic. Journ. xi. 97-106, illustrated).

Crowfoot—The Yellow Water. Chas. E. Bessey. (Amer. Nat. xxiv. 475).

Alluding to Professor Greene's recent restoration of the name *R. lacustris*, Beck and Tracy, to this plant, and to the fact pointed out by that investigator that its duration appears to be unknown, Dr. Bessey states that it probably grows about a year. This is hardly its habit on Staten Island, where it certainly appears to be perennial. The especial evidence that I have of this, is the case of a small pond where it grew abundantly some years ago, but bloomed only once in six years, and of another where I observed the green and growing plant in March of the present season. The plant which goes for var. *terrestris* may, however, be an annual. There is opportunity for some nice observation here. N. L. B.

Curled Leaf. H. W. Harkness. (Zoë, i. 87, 88).

The possibility is expressed that the fungus which infests the

leaves of *Æsculus Californica* may be identical with *Ascomyces deformans* so well known and dreaded in the peach orchards.

Elm—The American. (Garden and Forest, iii. 281, 282, illustrated).

Contains an excellent representation of a typical New England country road and tree of *Ulmus Americana.*

Embothrium coccineum. (Gard. Chron. vii. 716, fig. 121).

Encelia farinosa, Gray. T. S. B. (Zoë, i. 83).

The author states that "this species has received a synonym by the publication of *Encelia radians* in Proc. Cal. Acd. Ser. A., ii. 176," which was founded upon a low smooth form, without the characteristic tomentum. Its local name is "incienso," on account of the gum from it, which is burned as incense in the churches.

Escapes in the Coast Range. Frank. H. Vaslit. (Zoë, i. 86).

The following plants are noted as having escaped and become naturalized: *Scabiosa atropurpurea, Dipsacus fullonum, Vinca major* and cultivated *Chrysanthemums,* which latter are stated to be "rather troublesome to get rid of."

Euphorbiaceæ—Contributions to North American—II. C. F. Millspaugh. (Pittonia, ii. 82–90; reprinted).

This includes I., "Upon *Euphorbia serpyllifolia,* Pers. and its Forms," a critical study of this wide-spread and variable species; three varieties are recognized: var. *consanguinea,* to which are referred plants by other writers considered the same as the African *E. sanguinea,* Hochst. & Steud.; var. *Neo-Mexicana* (*E. Neo-Mexicana,* Greene), and var. *rugulosa.* Under II, "Notes upon some New or Noteworthy Species," *E. pseudoserpyllifolia* from Arizona, *E. Greenei* from Idaho, *E. Laredana* from Texas, *E. Jonesii* from Arizona, and *E. dentata,* var. *gracillima* from Arizona are described as new, and interesting facts concerning other species are recorded. *Croton Sonoræ,* Torr., is Mr. Reverchon's No. 1595 from Texas. N. L. B.

Garrya elliptica. E. Molyneux. (Garden, xxxvii. 501, illustrated).

Representing the appearance of a porch covered with it in the south of England, where it is evidently a favorite in cultivation.

Geology of Artesian Wells at Atlantic City, N. J. Lewis Wool-

man. (Proc. Acad. Nat. Sci. Phil., Part I, 1890, 132-144). Contains a complete list of the diatoms found, as noted in the BULLETIN, Vol. xvi. Nos. 3 and 8.

Grass—A New. Geo. Vasey. (Bot. Gaz. xv. 106-110, Pl. xii.). A new genus and species is founded upon specimens collected by Dr. Edward Palmer at La Paz, Lower California. Its relationships are with *Uniola* and *Distichlis.* The name proposed for it is *Rachidospermum Mexicanum.*

Grasses in the Wrong Genus. W. J. Beal. (Bot. Gax., xv. 110-112).

The genera *Stipa* and *Oryzopsis* are considered in this article, with the result of placing *Stipa Richardsoni*, Link, *S. Mongolica*, Turcz., *S. caduca*, Scribner, and *S. Pringlei*, Scribner, in the genus *Oryzopsis*

Isles de la Madeline.—Liste des Plantes Rencontrer aux. L'abbé L. Provancher. (Le Nat. Canadien, xix. 346).

Isoëtes echinospora, Durieu.—*Die Ersten Keimungs stadien der Makrospore von.* Douglas H. Campbell. (Ber. d. Deutsch. Bot. Gesellsch., viii. 97–100, t. V.; reprinted),

Lemaneaceæ of the United States—Monograph of the.—Geo. F. Atkinson. (Annals of Botany, iv. 177–229, Pl. vii. viii. ix.).

This order of fresh water Algæ has been made the subject of critical study by Prof. Atkinson for the past five or six years, and his results are embodied in this exhaustive monograph. The plants inhabit turbulent water, rapids, mill-dams, etc., growing generally at a depth of a foot or more. The morphology is treated of under the three stages in their life history. (1) The prostrate or permanent form, which in autumn gives rise to (2) the *Chantransia*-form and (3) the sexual shoot, which is developed from the latter, the period of fertilization being in spring. The development of the reproductive organs on this sexual shoot, of the protonema, the germination of the spores and the processes of fertilization are described in detail. In the systematic part of the paper all the seven United States species of *Lemanea*, the only genus recognized, are thoroughly described. It is to be regretted that the generic name *Apona*, Adans, which has long priority, was not taken up. The plates illustrate the morphology and anatomy of the plants in the greatest detail. N. L. B.

Lepidium Virginicum in Francia—L. Michelletti. (Nuovo Gior. Bot. Ital. April, 1890).

Lepidium Virginicum, first mentioned in France in the Flora de France of Grenier and Godron (1848) as naturalized in a single spot, the lazaretto of Bayonne, has spread in the departments of Landes and Basses Pyrenees, where it is now established in waste places and along railroads.

Darracq, a pharmacist at Dax, unwilling to admit that a plant so common should not be indigenous, made a new species of it, *L. majus*. It has been compared with the American plant, and, as they are identical, the new name has perforce been dropped. In 1881, on the banks of the Meurthe, near Nancy, a few specimens of *L. Virginicum* were found among growths of *L. ruderale* and two other adventive American plants a *Gilia* and *Amsinckia lycopsioides*. They lasted about ten years, and disappeared along with the manufactory of flannel shirts, to which they probably owed their origin in that place, as the wool used in the looms (presumably brought from Chili) was cleaned in the river and spread on its pebbly banks to dry.

L. Virginicum disappeared with the rest of the foreigners, but several years later was found again near Nancy, and with *Poa poæoides* and *Salvia verticillata* is spreading along the railroads.

Œnothera biennis and *O. muricata* are adventive on the banks of the Moselle, and abundant there. A. M. V.

List of Plants collected in Alaska in 1888. Geo. Vasey. (Proc. Nat. Mus. 1889, 217, 218).

This list is compiled from the specimens collected during the cruise of the U. S. Fish Commission steamer Albatross.

Mesocarpus pleurocarpus. W. J. Beal. (Microscope, x. 172-174, figs. 1, 2, 3).

New or Noteworthy Species, VIII. Edward L. Greene. Pittonia, ii. 100-106.

Vancouveria parviflora, *V. hexandra*, Greene, var. *chrysantha*, *Ceanothus vestitus*, *Saxifraga ledifolia*, *Parnassia Californica*, *Selinum eryngiifolium*, *Sium heterophyllum*, *Mentzelia affinis*, *Brickellia rhomboidea*, *Downingia montana*, *Eunanus pulchellus*, *Amarantus carneus*, *Juncus uncialis*, and *Sisyrinchium Elmeri* are all described as new.

Notes on North American Trees—XVII. C. S. Sargent. (Garden and Forest, iii. 260).

The author takes for discussion in this article the West Indian Birch or Gum Elemi, which is native in southern Florida. In the first addition of the "Species Plantarum," it is described under the name *Pistacia Simaruba*, but in the second edition the genus *Burseria* of Jacquin was accepted, modified, however, to *Bursera*. The curious fact in this connection is noted that while the second edition of Linnæus' work is dated 1762, he quotes correctly Jacquin's figures of *Bursera*, although the work in which this appears bears the date 1763. The author considers it probable that Jacquin submitted his figure and description to Linnæus' before they were actually published. The name *Bursera Simaruba* is therefore proposed for this tree.

Notes on West American Plants. Katherine Brandegee. Zoë, i. 82, 83).

New, or little known localities, in California are described for ten species and varieties of plants.

Pachysandra procumbens. (Am. Garden, xi. 346, illustrated).

Parry—Charles Christopher. C. R. Orcutt. (West. Am. Sci. vii. 1-5, illustrated).

Biography and portrait.

Palmerella. Edward Palmer. (West. Am. Sci. vii. 8, 9).

A little controversy is started in regard to priority in the discovery of *Palmerella debilis*, Gray, and incidentally as to its generic position and whether we should know it as *Lobelia Rothrockii* or *L. Dunnii*.

Perityle—Preliminary Notes on. J. N. Rose. (Bot. Gaz. xv. 112-119, Pl. xiii; also reprinted).

The following new species and varieties are described. *P. Brandegeana*, *P. Rothrockii*, *P. Greenei*, *P. Socorrosensis*, *P. Grayi*, and *P. Emoryi*, Torr. var. *Orcutti*. Enlarged representatives of the akenes are given for *P. Fitchii*, *P. Brandegeana*, *P. Californica*, *P. cuneata*, *P. microglossa*, *P. Emoryi*, var. *Orcutti*, *P. Greenei*, *P. Grayi*, and *P. Socorrosensis*.

Pinus glabra. Carl Mohr. (Garden and Forest, iii. 295).

A popular account of this pine in its native habitat and the vegetation accompanying it.

Plants from the Andes—New. Edmund G. Baker. (Journ. Bot. xxviii. 161, 172; t. 207).

Helosis Whymperi from Ecuador is described and figured; a list of four fungi, among them *Cantharellus Whymperi*, a new species from the same locality, a description of which is given by Messrs. Massee and Murray.

Provisional List of the Plants of the Bahama Islands. John Gardiner and L. J. K. Brace, with notes and additions by Charles S. Dolley. (Proc. Acad. Nat. Sci. Phila., 1889, 349-426; reprinted).

This list, already mentioned in the BULLETIN, enumerates 621 species of plants as indigenous, introduced and cultivated in the Bahamas. It is based mainly on a list made by Mr. Gardiner, while scientific adviser to the Board of Agriculture of the Bahamas, in 1886, and on a catalogue of the plants of New Providence, made some years previously by Mr. Brace. The common names of the plants are given, as well as memoranda of their actual or supposed economic uses. Some few additions have been made by Professor Dolley and others from Mr. Herrick's collection on Abaco and adjacent islands. (Johns Hopkins Univ. Circ. vi. 46).

As the extensive collections now being made by Dr. and Mrs. Northrop will soon be available for study, it may be worth while in this connection to indicate the material now available from which a reasonably complete enumeration of Bahaman plants may be brought together:

(1) A few species were collected by Catesby early in the 18th century, and some of them figured in his "Natural History of Carolina," 1754.

(2) A collection of about 100 species was made by Mr. Wm. Cooper, for Dr. Torrey, at New Providence, in 1859, and are preserved, with a partial manuscript list by Dr. Torrey, in the Columbia College Herbarium.

(3) Grisebach's "Flora of the British West Indian Islands," 1864, records something less than 200 species from Bahama, based mainly on a collection made by a Mr. Swainson, and transmitted to Sir Wm. J. Hooker. These plants are at Kew.

(4) Mr. L. J. K. Brace, one of the authors of the work here

reviewed, transmitted to Kew during the years 1880 and 1887, seven parcels containing 525 nnmbers.

(5) In 1887, a committee of the British Association for the Advancement of Science, appointed for the purpose of exploring the flora of the Bahamas, sent Baron Eggers out as collector, and he obtained 314 species. These are at Kew, together with a manuscript catalogue, and a duplicate set at South Kensington. The report of this committee is published in the Proceedings of the British Association, at the Bath meeting, 1888, and reprinted as a 3-page pamphlet, giving much valuable information. The collection was named by Mr. Baker.

(6) Mr. F. H. Herrick made a small collection in June, 1886, on the island of Abaco, an account of which, with determinations of the species by Prof. D. C. Eaton and Mr. W. A. Setchell, is printed in Johns Hopkins Univ. Circ. vi. 46, 47, 1886; specimens of these are extant.

(7) The collections of Prof. Dolley, preserved at the University of Pennsylvania.

(8) Those of Dr. and Mrs. Northrop, a considerable portion of which are already received. N. L. B.

Rosa Sayi. L. H. B. (Am. Garden, xi. 362, Pl. I.).

Rusts, Smuts, Ergots and Rots. Byron D. Halsted. (Pamph. 8vo., pp. 21, illustrated).

An address delivered before the N. J. Board of Agriculture, Jan. 31, 1890. *Phytophthora infestans* and *Claviceps purpurea* are figured, besides representations of *Puccinia*, *Ustilago* and *Tilletia*, sp.

Stamens of Solanaceæ—Notes upon. Byron D. Halsted. (Bot. Gaz. xv. 103–106, Pl. xi; also reprinted).

Read before the Biological Section of the A. A. A. S., Toronto meeting.

Symphoricarpus occidentalis. C. S. S. (Garden and Forest, iii, 296, fig. 42).

The True Grasses. By Edward Hackel. Translated from Die Naturlichen Pflanzenfamilien. F. Lamson Scribner, and Effie A. Southworth. Copiously illustrated (New York, Henry Holt & Co., 1890. 8vo, pp. viii. + 228. $1.50).

In Engler and Prantl's Naturlichen Pflanzenfamilen are

brought together, in concise but comprehensive manner, general accounts of each of the orders of plants, accounts especially valuable and authoritative, since they are first prepared by specialists in those orders and then made to conform to the rest of the work by passing through the hands of the editors. The present book is a translation of a portion of this work. Part I, following the preface and an introduction, illustrating the use of the analytic key, is a most excellent account of the principal features, especially the morphology of the order. Part II is an analytically arrayed conspectus of the tribes and genera, with descriptions; the whole interspersed with remarks upon the more important scientific or economic facts, and copiously illustrated with good figures. The translators have combined a thorough understanding of technical German with a special knowledge of grasses, and the resulting translation is accurate, clear and scientifically correct. The only point of criticism is an occasional too close adherence to the original idiom. The title might better have been simply "The Grasses," for in "Echte Gräser" the adjective serves only to distinguish the name from others containing the same root-word, as "Riedgräser" (sedges). The English terminology does not require the distinguishing mark.

The book will be a valuable aid, especially in method, to the American student of grasses. F. V. COVILLE.

Tillandsia amethystina. J. G. Baker. (Bot. Mag. Tab. 7121.).

Tuomeya fluviatilis, Harvey—Concerning the Structure and Development of. Wm. A. Setchell. (Proc. Am. Acad. Arts and Sci. xxv. 53-68. figs. 1-15; reprinted).

The rediscovery of this long-lost fresh-water alga by our friend Mr. Isaac Holden and several other New England collectors, and the excellent description and figures by Mr. Setchell, will awaken much interest and set collectors from Maine to Alabama searching for it. The comparison of *Tuomeya* with *Batrachospermum* and *Lemanea* prove them to be closely allied. E. G. B.

Proceedings of the Club.

JUNE 10TH, 1890.

The Vice-President in the Chair, and 21 persons present.

The following persons were elected Corresponding Members:

Prof. Hoffman, Rodney, Miss.; Miss Verona Maple, Glenville, W. Va.

The Editor announced that the fourth and concluding number of Volume I. of the Memoirs, containing Dr. E. Lewis Sturtevant's paper on "Seedless Fruits." had just been distributed, and that No. 1 of volume II., containing Professor Halsted's paper on "Reserve Food Supply of Twigs and Buds," would probably be printed during the summer.

Dr. Rusby reported the discovery of *Caltha flabellifolia*, near Canadensis, Penn., and remarked on the different time of flowering of *Rhododendron nudiflorum* and *R. canescens* at that locality, the former being considerably earlier.

Dr. Britton gave a preliminary account of the recent trip of several members of the Club to southwestern Virginia, a complete description of which will appear later in the BULLETIN.

JUNE 25TH, 1890.

The President in the Chair, and 18 persons present.

The following persons were elected Active Members: Mr. Thomas Craig; Miss Mary B. Dennis; Mr. William Lowey; Dr. Alonzo Pettit and Mrs. Pettit; Mrs. A. W. Dimock and Miss Mabel Dimock.

Dr. Rusby exhibited a specimen of *Calopogon tuberosus* with 13 flowers, from Little Falls, N. J., and spoke of his list of corrected plant-names selected from Dr. Britton's recent catalogue of the plants of New Jersey, a copy of which he proposed to mail to each member of the Club.

Judge Brown spoke of the great abundance of *Veronica officinalis* in the southern Alleghenies, and of his conviction that the plant is native in that region.

Dr. Britton stated that *Leontodon hirtus* of Europe had recently been detected in southern New Jersey by Rev. Dr. J. E. Peters, and remarked on the occurrence of *Cleome pungens* at Camden and Burlington, N. J.

Dr. Newberry mentioned some of the botanical facts noted in his recent trip to Colorado.

Dr. Rusby read the announced paper of the evening, "A Memoir of Dr. Geo. Thurber."

Club then adjourned until the last Wednesday in September.